



Waterjet Systems  
INTERNATIONAL

# High-Pressure Waterjet Cutting Pumps

**MODEL V50**

## V-SERIES WATERJET PUMPS

### Uniting Quality, Performance, and Supreme Value.

The V-Series combines industry leading technology and superior support components to deliver the most dependable, highest performing, and best value intensifier pump in its class. Built for reliability in the industry's most demanding applications, the V-Series provides intuitive controls and a user-friendly design that make it ideal for both experienced professionals and newcomers.

Explore the many advantages and contact WSI to learn more about why the V-Series Waterjet Pumps are the best value in the waterjet industry today.



### Features and Advantages



- Consistency and Quality – WSI is the only high-pressure pump manufacturer to produce virtually all of its high-pressure components and pumps in-house, from frame fabrication to complete intensifiers; resulting in unequalled consistency, quality, and accountability.
- Elements of WSI's advanced 90,000 psi technology are used in processing critical V-Series components resulting in performance far exceeding 60,000 psi industry standards.
- V-Series pumps provide an average savings of more than 20% on annual spare part expenditures.
- WSI is the Industry Leader in satisfaction for product quality and service after the sale.
- Patented Replaceable-Seat Check Valve Technology – Only WSI offers patented technology to insulate the inlet check valves from contact with moving parts.
- Redundancy Capable – Order or add a second back-up intensifier to further extend class-leading uptime usually only found in the most expensive waterjet pumps.
- Stainless Steel vs. Plastic – Best-in-class SS Water Filtration Assembly for robust, long-term use versus brittle, leaky, plastic assemblies.
- Brass fittings featured throughout the system instead of temperamental plastic manifold blocks.
- Threaded high-pressure cylinders with coated threads provide superior alignment, ease of maintenance, and extended operational life.
- Full-Weld, 3/16 Gauge Steel, Hydraulic Reservoir is included with easy access cleanout ports.
- Above-board, safety dump valve for ease of access, monitoring, and maintenance.

For businesses both large and small, WSI Waterjet Systems International is defined by its commitment to quality, value, and service, which continues long after the sale. WSI takes pride in being the globally established, recommended, and trusted designer, manufacturer, and servicer of ultra-high-pressure and high-performance waterjet cutting pumps and replacement parts. Only WSI delivers handcrafted, patented technology, reduced operation costs, a longer running life, and a truly unique approach to providing customers with the long-term relationship necessary for the successful operation and maintenance of its waterjet cutting pumps.



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**UNRIVALED DEPENDABILITY IN CUTTING PUMPS, PARTS, AND SERVICE**



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# High-Pressure Waterjet Cutting Pumps

## MODEL V50

### TECHNICAL SPECIFICATIONS

**Maximum Operating Pressure:**

60,000 psi (4,140 bars)

**High-Pressure Flow Rate:**

1 gpm (3.78 lpm)

**Intensifier Cycle Rate:**

22 cycles/min. at max flow rate

**Electrical System:**

Main Motor: 40 hp / 30 kW (TEFC)

208 VAC / 3 ph. / 60 Hz

230 VAC / 3 ph. / 60 Hz

460 VAC / 3 ph. / 60 Hz

380 VAC / 3 ph. / 50 Hz

Motor Speeds:

1,800 rpm @ 60 Hz

1,500 rpm @ 50 Hz

Controls:

24 VDC

Safety Shutdown Circuits:

High Oil Temperature

Low Oil Level

Low Water Pressure

Intensifier Over-Speed

Intensifier Stall

Shutdown "Overload"

**Hydraulic System:**

4.33 cu. in. (71 cu. cm) Axial Piston Pump

Max Operating Pressure: 3,000 psi (207 bars)

Cooling Water Flow Rate: 2 gpm (756 lpm)

**Low-Pressure Cutting Water System:**

Optimum Inlet Pressure: 65 psi (4.50 bars)

Booster Pump Setting: 125 psi (12.0 bars)

**Orifice Capacity at 60,000 psi (4,140 bars):**

Quantity / Orifice Diameter

1 ± 0.014 in. (0.35 mm)

2 ± 0.010 in. (0.25 mm)

4 ± 0.007 in. (0.17 mm)

8 ± 0.005 in. (0.12 mm)

**Physical Dimensions:**

Height: 45 inches (1.14 meters)

Width: 37 inches (0.69 meters)

Length: 75 inches (1.91 meters) with control panel

Weight: 2,950 pounds (1,338 kg)

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

### Additional Standard Features

- Custom-tuned, high-performance hydraulic control valve for quick, seamless shifting.
- Soft Start to reduce amp pull on startup and eliminate voltage spikes.
- Industry-leading Rexroth hydraulics ensure dependable operation year after year.
- Allen Bradley Electrical Components guarantee precise control, split-second shifting, and long life throughout the system.
- Effortless air-assisted top cover and latched side covers with unencumbered 3-sided intensifier access.
- Dual Pressure Control for simple transition between two pre-set cutting or piercing pressures.
- A thermostatically controlled water valve regulates cooling to bolster component life while minimizing water usage.
- Inline booster pump for consistent, positive water flow. No additional electric motor required.



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UNRIVALED DEPENDABILITY IN CUTTING PUMPS, PARTS, AND SERVICE